



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,136	11/07/2001	Byung Hee Sohn	263/009	4660
27849	7590	03/01/2004	EXAMINER	
LEE & STERBA, P.C. 1101 WILSON BOULEVARD SUITE 2000 ARLINGTON, VA 22209			GARRETT, DAWN L	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/986,136	<b>Applicant(s)</b> SOHN ET AL.	
	<b>Examiner</b> Dawn Garrett	<b>Art Unit</b> 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5 and 11-13 is/are allowed.
- 6) ☒ Claim(s) 1,2,6-10 and 14-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

#### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 10, 2004 has been entered.

#### *Response to Amendment*

2. Applicant's previous amendment under 35 CFR 1.116 has been entered as requested. Claims 1, 6, and 17 were amended. The examiner has rejoined claim 17. Claims 1-18 are pending.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. The rejection of claims 1, 2, 6, 8-10, and 14-16 under 35 USC 112, second paragraph, is withdrawn due to the amendment of claims 1 and 6.
5. The rejection of claim 7 under 35 USC 112, second paragraph, is maintained because "n" remains indefinite in the claim.
6. Similar to the rejection of claim 7 above, claim 18 is now rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The variable "n" in formula (1) has not been defined and accordingly, it is unclear how many repeating units in parenthesis may be present in the polymer. Please see suggested claim language for "n" in paragraph 9 below.

Clarification and correction are required. The allowability of claim 18 previously indicated is withdrawn due to this rejection.

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. The rejection of claims 1, 2, 6, 8-10 and 14-16 under 35 USC 112, first paragraph, as set forth in paper no. 11 (mailed 9/12/2003), paragraph 10, is withdrawn.

9. Claims 1, 2, 6, 8-10 and 14-17 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for values of R which are alkoxy groups having 1 to 40 carbon atoms or branched alkoxy groups having 3 to 40 carbon atoms (see page 4 of specification), does not reasonably provide enablement for the more broad term "an alkoxy group" (see claims 1, 6, and 17). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

10. Claims 1, 2, 6, 8-10 and 14-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The added limitation "wherein the variable "n" is an integer in the range of 30 to 3,000" is new matter. The examiner can not find clear support for the range within the specification. The examiner suggests the following claim language to describe the "n" variable by incorporating the limitations of claim 2 in the independent claims: "wherein the variable "n"

is a number such that the number average molecular weight of the electroluminescent polymer is about 10,000-1,000,000 and the molecular weight distribution thereof is about 1.5-5.0”.

***Allowable Subject Matter***

11. Claims 3-5 and 11-13 are allowed for the reasons set forth in Office action, paper no. 8, mailed March 27, 2003.

***Response to Arguments***

12. Applicant's arguments filed February 10, 2004 have been fully considered but they are not persuasive. The examiner respectfully disagrees that the disclosure for the formula (1) polymer as having “a number average molecular weight (Mn) of about 10,000 – 1,000,000” provides clear support for a value of “n” that is 30 to 3,000. Because different substituents of varying molecular weight may be present on the polymer, the range 30 to 3,000 is deemed to only be an estimate by applicants.

The reasons for the rejection of “alkoxy group” as new matter have been discussed in the above rejection.

The examiner has rejoined claim 17 as requested.

***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is 571-272-1523. The examiner can normally be reached Monday through Friday during normal business hours. Please allow the examiner twenty-four hours to return your call.

Art Unit: 1774

If reasonable attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached at 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
DAWN GARRETT  
EXAMINER  
ART UNIT 1774

D.G.  
February 19, 2004